



Intron	Position	5' to 3' sequence at EXON/intron boundary
1	135-136	GCGTGGAGgtatgtggctggagtcagct ---- attttgttttgttttttaaagACTTGGCC
2	255-256	TCACGGAGgttagaatgctgagcacgta ---- gtcatgtgtaatcatgcagGTGGTTCC
3	422-423	TTATCCAGgtaatgaatccacttttaca ---- atgtctttttattcctgtagGTGTGAAA

FIG. 1

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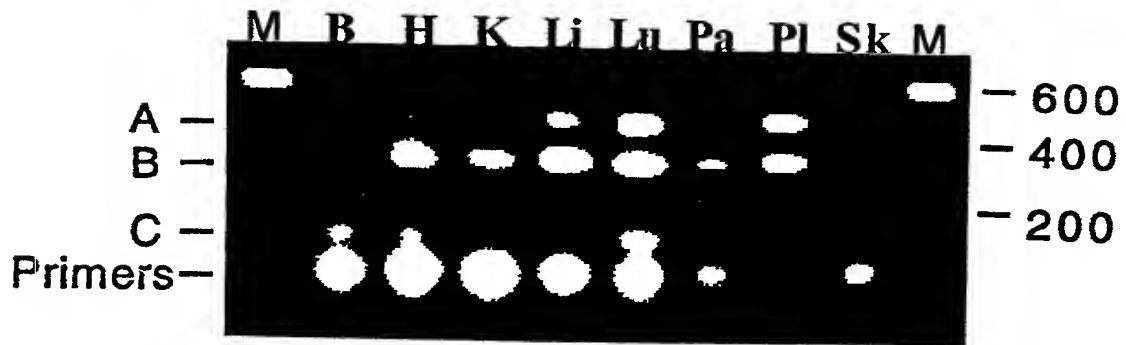


FIG. 2A

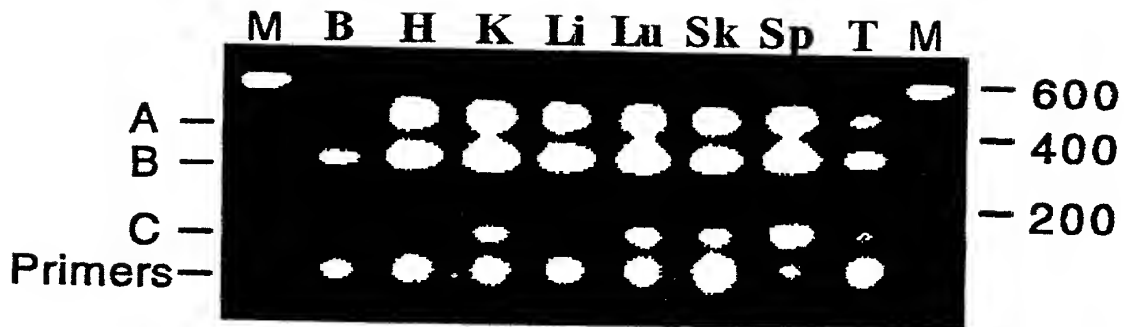


FIG. 2B

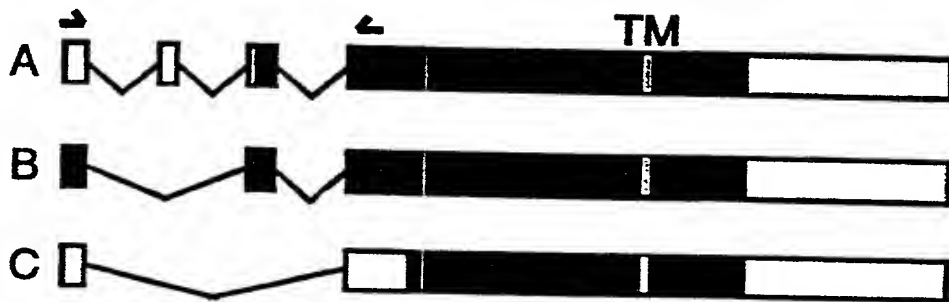


FIG. 2C

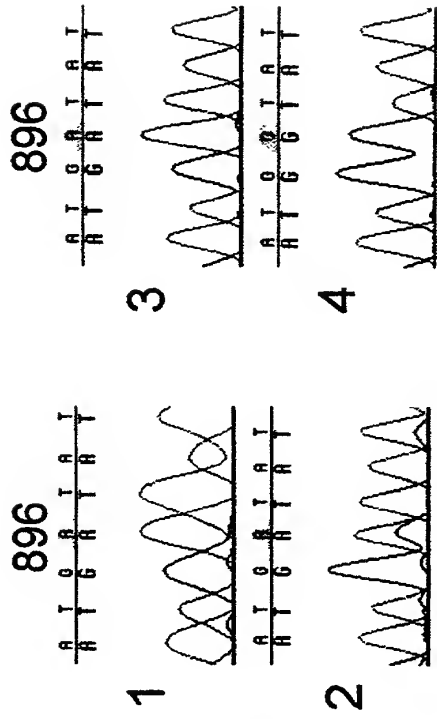


FIG. 3A

↓

Human (aa 290)	.	.	.	L	A	Y	L	D	Y	L	D	D	I	I	D	L	F	N	C	L	T	N	V	.	.	.	
Mouse (aa 289)	.	.	.	L	T	Y	T	N	D	F	S	D	D	I	V	K	-	F	H	C	L	A	N	V	.	.	.
Rat (aa 289)	.	.	.	L	T	Y	I	N	H	F	S	D	D	I	Y	N	-	L	N	C	L	A	N	I	.	.	.
Hamster (aa 289)	.	.	.	F	T	Y	A	N	E	F	S	E	D	I	T	D	-	F	D	C	L	A	N	V	.	.	.

FIG. 4

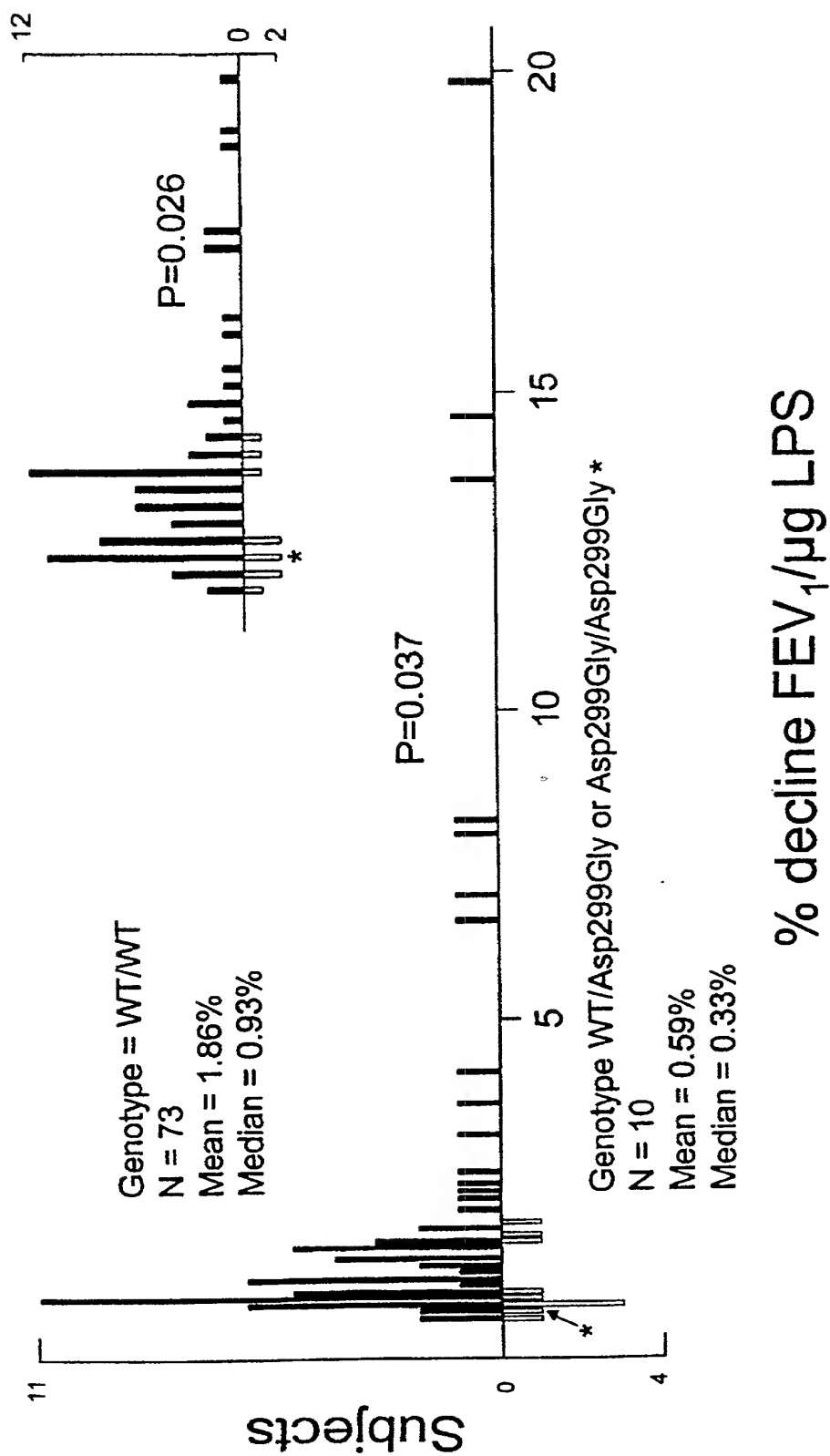


FIG. 5

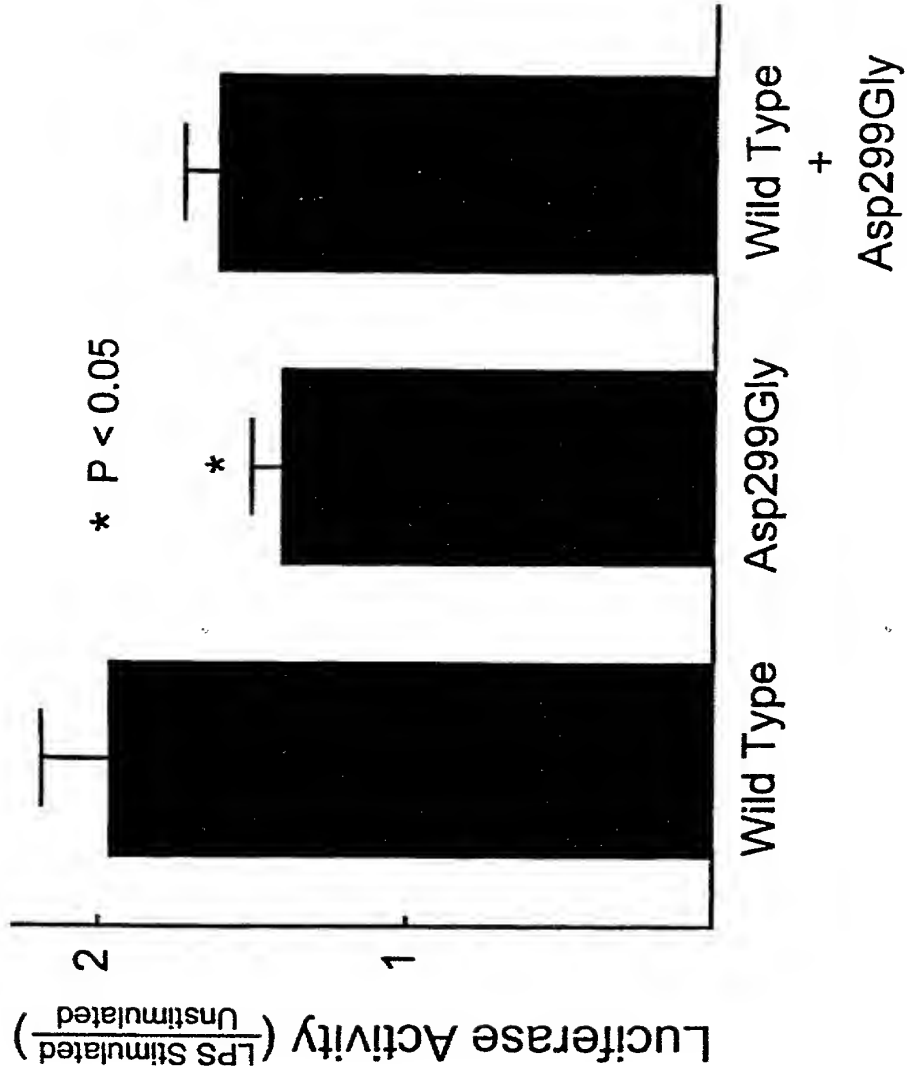


FIG. 6A

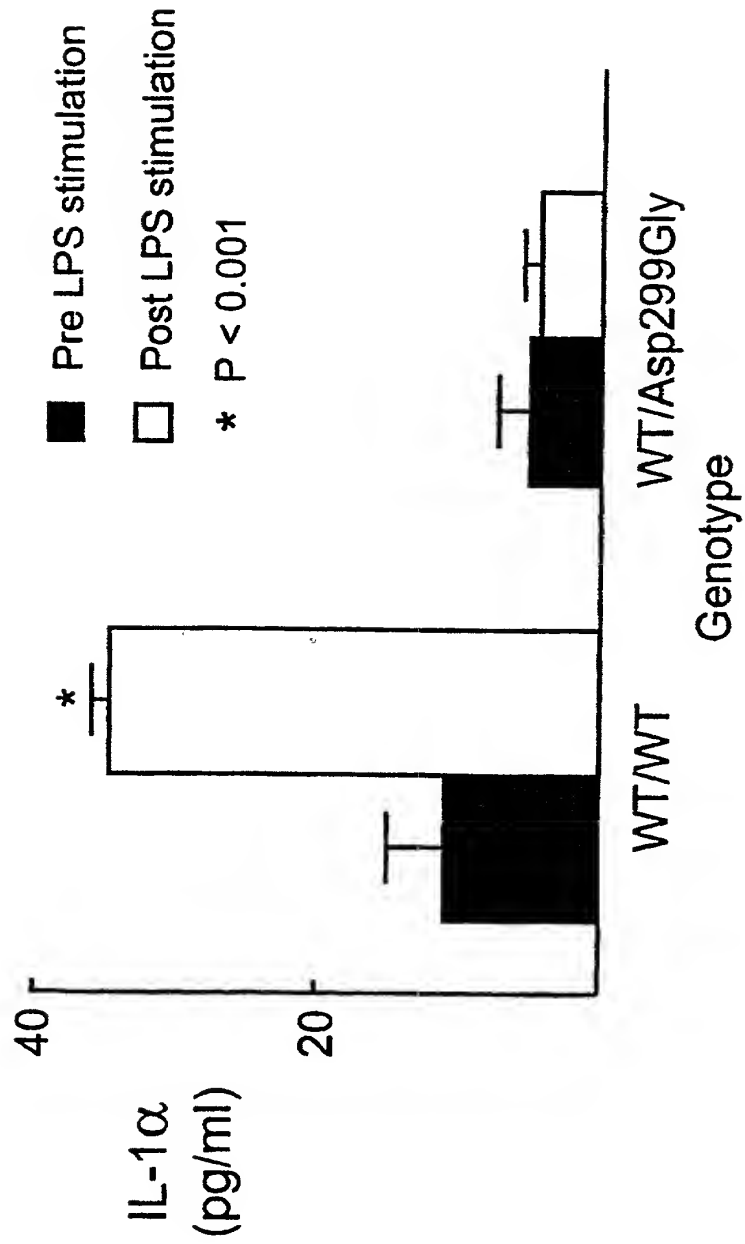


FIG. 6B

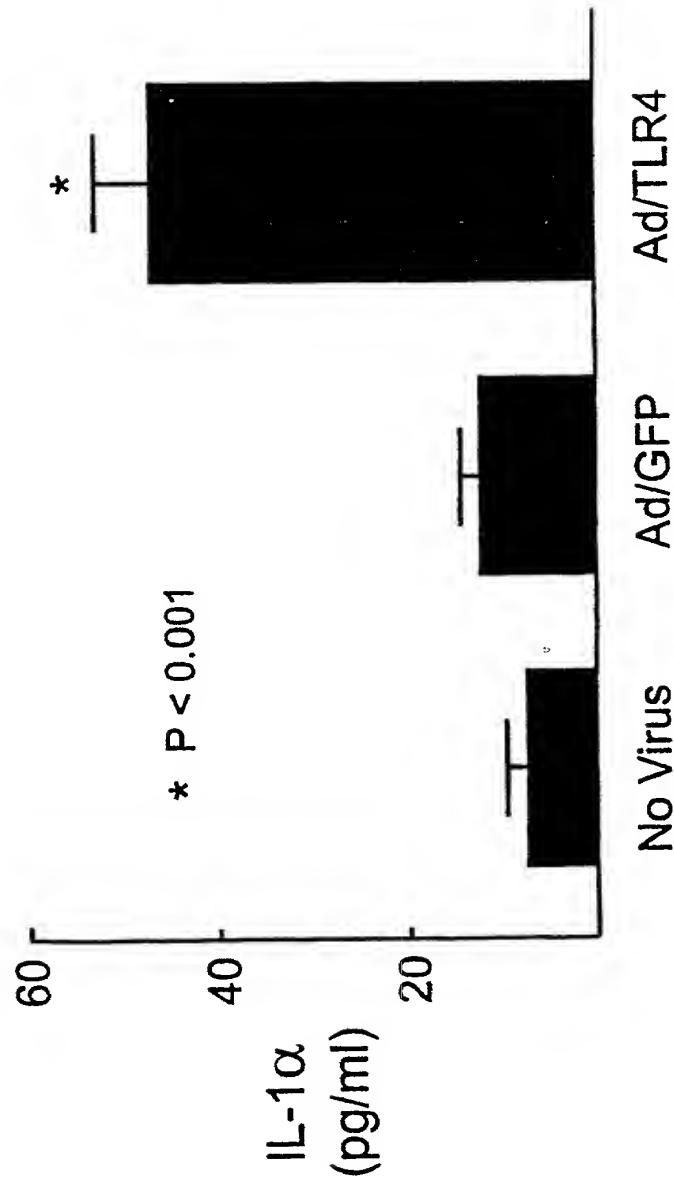


FIG. 6C

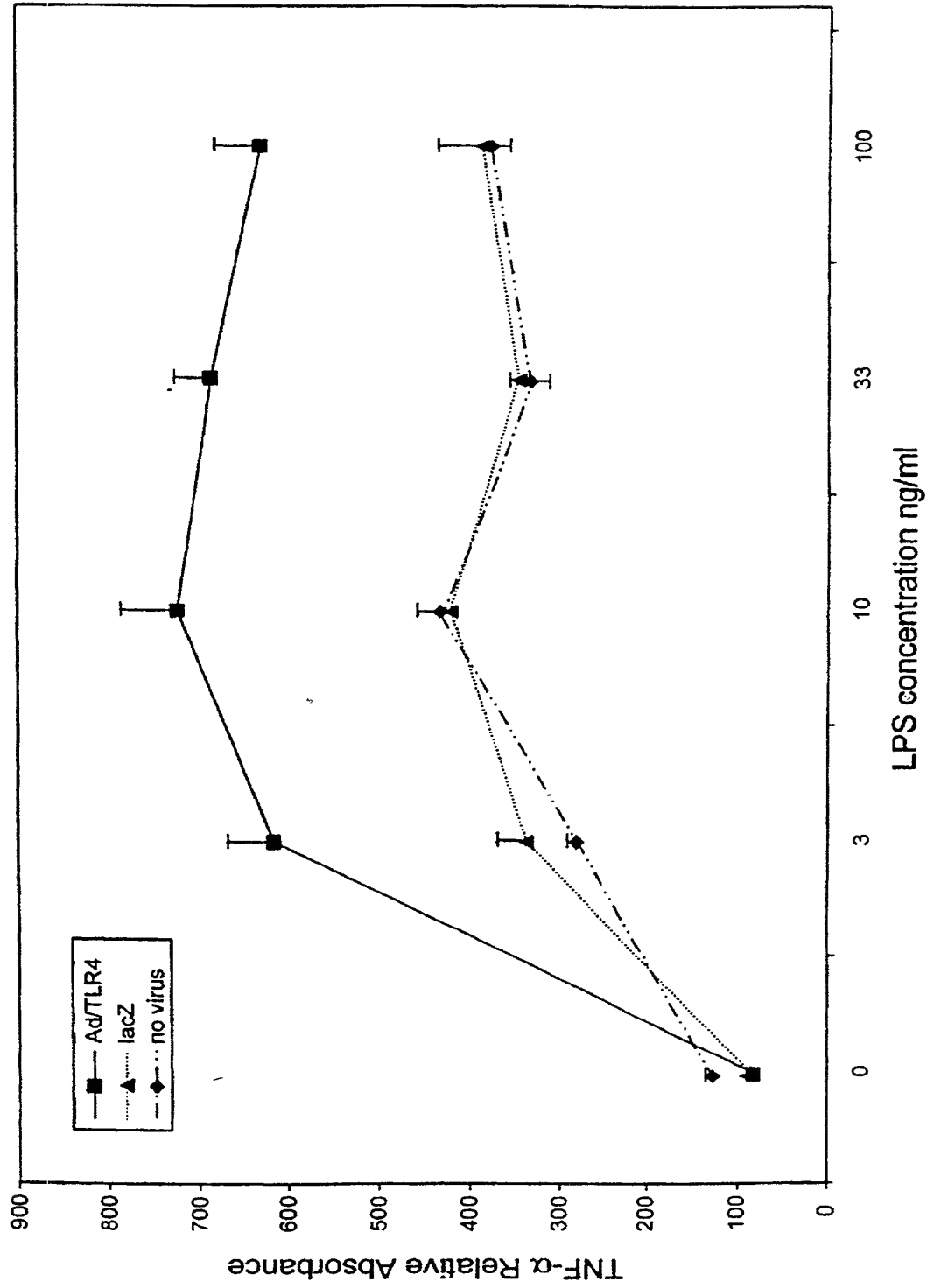


FIG. 6D

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<u>Amino Acid</u>	<u>Codon</u>
Phe	UUU, UUC
Ser	UCU, UCC, UCA, UCG, AGU, AGC
Tyr	UAU, UAC
Cys	UGU, UGC
Leu	UUA, UUG, CUU, CUC, CUA, CUG
Trp	UGG
Pro	CCU, CCC, CCA, CCG
His	CAU, CAC
Arg	CGU, CGC, CGA, CGG, AGA, AGG
Gln	CAA, CAG
Ile	AUU, AUC, AUA
Thr	ACU, ACC, ACA, ACG
Asn	AAU, AAC
Lys	AAA, AAG
Met	AUG
Val	GUU, GUC, GUA, GUG
Ala	GCU, GCC, GCA, GCG
Asp	GAU, GAC
Gly	GGU, GGC, GGA, GGG
Glu	GAA, GAG

FIG. 7

Original Residue	Exemplary Substitutions	Preferred Substitutions
Ala (A)	val; leu; ile	val
Arg (R)	lys; gln; asn	lys
Asn (N)	gln; his; lys; arg	gln
Asp (D)	glu	glu
Cys (C)	ser	ser
Gln (Q)	asn	asn
Glu (E)	asp	asp
Gly (G)	pro	pro
His (H)	asn; gln; lys; arg	arg
Ile (I)	leu; val; met; ala; phe norleucine	leu
Leu (L)	norleucine; ile; val; met; ala; phe	ile
Lys (K)	arg; gln; asn	arg
Met (M)	leu; phe; ile	leu
Phe (F)	leu; val; ile; ala	leu
Pro (P)	gly	gly
Ser (S)	thr	thr
Thr (T)	ser	ser
Trp (W)	tyr	tyr
Tyr (Y)	trp; phe; thr; ser	phe
Val (V)	ile; leu; met; phe; ala; norleucine	leu

FIG. 8

HUMAN TLR4 GENOMIC SEQUENCE

AAAATACTCC CTTGCCTCAA AAACCTGCTCG GTCAAACGGT
 GATAGCAAAC CACGCATTCA CAGGGCCACT GCTGCTCACA
 AAACCAAGTGA GGATGATGCC AGGATGATGT CTGCCTCGCG
 CCTGGCTGGG ACTCTGATCC CAGCCATGGC CTTCTCTCTCC
 TGCCTGAGAC CAGAAAGCTG GGAGCCCTGC GTGGAGGTAT
 GTGGCTGGAG TCAGCTCCTC TGAACCTTCC CTCACCTCTG
 CCCAGAACTT CTCACCTGTGT GCCCTGGTTT GTTTATTTTT
 GCAAAAAAAA AAAGAGTTAA ATTACCTTAA AGACTCAAGA
 AGCCACAGAG ATCAAATAAT TCATTGTTAC AGGGCACTAG
 AGGCAGCCAT TGGGGGTTTG TTCCATTGAG AAATTTTGAG
 TGCTAACAGG GGCATGAGAT AACATAGATC TGCTTAAGGT
 CCCTGCTCTG CTACCTTGAG GCTCTGTGAA GAAATTATCA
 AACCTGTCTG AGACTAGTTT TCGCATCTGT AAGAGAATTA
 TAATACCTTC TTCACTAGAG AGTAAGCAGA CTGCTTCAGT
 GTCATTTCTT CCCACTGGTG GTCTTTACAC TCAGCTTCAA
 GCAGTCACCC TGCTCCTTTC AATCTCAGGA AAAAGATGGC
 TTTGTGTGTG TGTCTCT:A: G:AGAAAGAA CTTTCTAAGT
 TGGTGCAGA CTTCTGTATG CAGTAATATA GTTTAGTCCA
 GAGGATGAAA AAAATAAGAG A:ATGAAAAA GGAAAAGAGA
 GAGAGAGA:G AAGAAAAAAG CAAGAGGGAA AT:ATGTATA
 ATGTCAGCTA ATGCAAC:AG TTTCTTTCTT AGTGAAATAC
 CAATCAGCTG :GTTG:GTAA TCTT:ATTCA TGATGGATCT
 CTTTTGTTTT TCCCCTGCGC AGACTTC:AC AGTTGCTTTA
 GAAACCCATA GTAGAGCCGA A:CAGCTAAG AAAATGATTT
 ACAGTGAGGC AGGGTCAGAA ACTCAAGAGA GAAAAAGCCA
 GCTGCAGTC: CTGAAGT:TG AGGATATAGG :AGAAAATCA
 AGTAATATTT AGCAAAGACT AATTCATTAT CTTGAAGCCA
 TCCCTTCCCT CAATTCCCTG CCCATAGTCC TCCTCCTTGT
 CCTCTTCTCT GNA:TCCCTC TGCTGTTAGG TTA:ATGG:A
 GATAGATTTT CTAATTANGC TCACTGCGAG ATAAAACCCA
 GCCCATGTTT CTATTAGNCA ATATTGTCTT TGAGGCTCCA
 TGGCTTGCAN CATTTAAGCA GACATACGAA TGAAGATCTG
 CATGTTTGAA CTCTGACTTT GCGCATATTA CTTCAATTTCT
 TTGAATTTCC ATTTTCCTCA TCTTTAAATG CTTATTTGAA
 GATTAAGTGA AAGTATATAA CAAACAAGAA CTATGCAGGC
 GTATGGTAAG GGATTAATGA TAGATGATAA TAATTAATGT
 TGACATCTAT TGATCACTTA TACTGTAGCG GGCTTTTAAA
 TAAACTCTTT AAACACCTTA TCTCATTTAA TCCTTCAAAC
 ATTCTATTGG TTTCAAACAA CAGAAAATA CAATTAGCTG
 GCTTCTGCAA GGAATTTTGT TGGAGGAAAT GAGAGCATTC
 AGAAATTAGA TGGGAGCGTT AGAGAATTAG GCTTACAAAG
 AATGTGGGAA AGTAGGCTAG AAAGCAGTGT AAAAACAAAG
 ACAGCATAAA GCACTTGACC TTATTTACTA GGTTCACCA
 TGGGAATCCA TGCACTCTAA AGATTTCCCC CTATTTCTAC
 ATCACTTTGC TCAAGGGTCA ATGAGCCAAG GAAAAGAATG

FIG. 9

CAGTTGTCAA AATCTGGGCC ATGACTAAGG AAGGTCTGGA
 CATCTTGACT GCCAGACAGT CTCCCCAATG ATATGGAGTA
 TTTAGAATGA TACTGGATAT TTTATTTATT TTTTGTATTT
 TCAACTTTTA AGTTCAGAGG CACATGTGCA GAGCATGCAG
 GTTTATTACA TAAGTAAATG TGTGCCATGG TGATTTGCTG
 CATAGATCAT GAAAATATGG AACGCATCAT GGATTTGTGT
 GTCATCCTTG TGCAGGGGCC ATGCTCATCT TCTCTGTATC
 CTTCCAATTT TAGTATATGT GCTACTGCAG CAAGCACGAT
 ATTGGATATT TTATTACCTA CATTTTACAT ATGATAAAAT
 GAGGCTCACT GAGGTTTTTC TTTTGTTCGT TTTATTTTGT
 TTTGTTTTTA AAGACTTG3C CCTAAACCAC ACAGAAGAGC
 TGGCATGAAA CCCAGAGCTT TCAGACTCCG GAGCCTCAGC
 CCTTCACCCC GATTCCATTG CTTCTTGCTA AATGCTGCCG
 TTTTATCNCG GAGGTTAGAA TGCTGAGCAC GTAGTAGGTG
 CTCTTTACTT TCTAATCTAG AGTAAGACAA TTTATAAGCA
 TGAATTGAGT GAATGGATGG ATGGATATAT GGATGGAAGG
 ATGGACAGAT GGATGAAAGG TTGACTGAAT TTTGTGCTTG
 CACAAAAAGA GGCCCTCTC CACCATCTCT GGTCTAGGAG
 AGGGGAGTTG GGAGACCATG CAGTAAAGAT ACTTCATGTC
 ATGTGTAATC ATTGCAGGTG GTTCCTAATA TTAATTATCA
 ATGCATGGAG CTGAATTTCT ACAAATCCC CGACAACCTC
 CCCTTCTCAA CCAAGAACCT GGACCTGAGC TTTAATCCCC
 TGAGGCATTT AGGCAGCTAT AGCTTCTTCA GTTTCCCAGA
 ACTGCAGGTG CTGGATTTAT CCAGGTAATG AATCCACTTT
 TACATACTGC ACAAGGTGAG GTGTTCAATG TCCTATCATT
 TCATTATTGG ACTGGAAAGC TTGGTTTGTG GAGTCTCATC
 TTCATTCACT TATTCATTCA TACAACAGAT GTCTTATTAA
 CTATATAACC TTGAGCAAGC TACCTCTATT CTCCAGGTCT
 CAGTTTTCTA ATCTGTGAAG TAGGCAGTTG GCTGAGACAG
 CTTCTAAGGG CAATTCTAAT TTTAGGTTTT CTTTAAAGAC
 AGGAGAGAAA ATTAGCTTAA ATTCTTTCAT AAGCAGCTAT
 TTATTGACTA CTTGCTATAT GTTGTACACT CTGCAAGAAG
 ACAGGCATAT ATTGATATAT AACACACAGC CCCTGTTGTT
 AAGGAGGCAT ATCTTCTTGA AAGAGTTAAT ACCTTAAAGT
 CCTGGGTATG GTCCTGGGTA CATAGTATAT AGTCAACACA
 TTTTAATTAT GATTTTTTGG ATCTGGAAAC TGATATAAAG
 ATAGCGACAT ATAACAGTAG GTGATAAATT ATGTTTAAAC
 TAAAGGTAAC TAATTGTATT TTTCAGAAGA GGGGCCTTCT
 CTGTGGTGGG TAGTCAAGAA AGATTCATGA ACTGCATAAG
 ATTCAAACAA TGTCTAGAAT ATTAAACTA GTGGTGGCAG
 GTGAAATGTC ATCTTGATAT TTTAGGGGAA CCAAATTCTA
 AAAGGGTTTT CATCATCGGG GCCTTATTTG CAAATCGAAC
 TAGATAATGG ATCATGTTCT CTGCAATGGT TTGTAACAACA
 TTTCAAACA TTTTACATAT TTTTATTAT AGAAATTATT
 GATAAAGACT AAGGTCACAG TATAAAAATC CTTTTTAGAG
 CAGACATTTT TGTAGAAGAG TGAACATATG ACCTATTATA
 CTCTAATTTG GATATAGATA GGATGTAACA AAGGAGTAAT

FIG. 9 (Continued)

GGGAACAATT CAAAGGCAGT GGTATAGTGC ATANAGTCCT
GTTGGGGTCA GAAGACCTGA GCCCAAGTTT ACCCCCAACA
TTTATAACCC ATGTAACCTT AGCATATTAC TTCATCTCCC
TTAATCCTTA GTTTCATATC TGATCAATGG AAATGATGAA
ACTTATTCTG CTGGATTAAA TGTGATAATA AATATTAATA
TGCTGTATAT ATTTAAATTT TTATAAAATA TATTTTATAA
GCATAAAGTA TTCTTACAGA ATTTCATTAG GTTTTTAAAA
TAATTTCAAC TTTTATTTTT GATTCAGGGA TTTACATGGT
TATATTGCGT AATGCTGAGG TGTAGGGTAC AATCGATACC
ATCACTCAGG TAGTGAGCAT AGTACCCAAT AGTTAGTTTT
TCAACCCTTG CTGCTTTCTC TCTATCCCCT CTCTAGTAAT
CCCCAGGGTC TATTTTTGTC ATCTTTATGT CCATGTGTAC
TCCATGTTTG GATCCTACTT ATAAAGTGAG AACTCATGGT
ATTTGGCTTT CTGTNCCTTT GTTNGCTAAT TTGCTTAGGA
TAATGGCTAC TAGCTGCATC TATGCCATTA TGTTCATAAT
TTCANTNCC TGCATGAAAA TTTTGTCAAG TACTCTATTA
AGGTAGACCA CCTCTCCCTT TTTTTTCAA ACAAGAAGTA
GNTTTTCCCA AACAAATGCC TTATGGAATT NATCTTCAAT
CCNNGGATAC CCAATAACTT GCCCCAAANC CTTAATCTGN
CTTACAGAGA GGCCACCTTC CTTCTGTAAC CCATAGGAGA
TTTGGAATTG TAAGAATGCT TTGTGATAGC CCAGCAGCCT
TCTTTCCCT ATAGAAATAT ATATATANTC TTTTATAGG
TGAGGAAGTG AAGCTTGAAT AATTTAAATG ACTTATATAC
ATNATCATTG CTTGTTAGCC ACAGACCAGA GATTTAAGTT
CNCATCTCCA GAATCCAAC TAAATGTTTT CTTTGTCTTA
ATACTCTACT TCTCTAAAGT GATTATCACC AATGTAATGA
TATAGAGNCA CAGCAAGACC CTTTCCTTCT CACCTAATGT
ATAGAGCAAT GCAGAGATAG AATGATGGGC TATAACAATC
ATATAATTGA AAGAAAGAAC TTCAAAAATA ATCAAGTTCA
GCTGTTTGAT TTATAAATGT GATAACTAAA ACCTAGAGAG
GAAAAGAGGT ACTCAAGATC ACACAGTAGG AGAGGACTGC
AGAAACACCA AACCCAAGCT CTTTGTCCA CTCTCCAGC
GTTCTTTCTA CTATACTGCC TATCCTTTAT CTAGTTACCA
ATAAATAACA AAAGCTTGGA CCACAATGCT TTTATTGTCT
AGGAAACTCC TGAAGAAGCT AAATAAAATG GGTGGGGAAT
ATTGTAAATG TAATTCAGGC TGGATTAAGA AAGAACTTAT
TTGACATTGT AACTGACAAG CACCTGCAAT GCTGAAAGGA
ATTTTTTCATT GGCNTGCTGT TTGCTGGGCT GCATCAAAGC
CCTGTCTCTA GGACATGTCT CTGAACATTG TGTGTAGCAT
GGCTTTCATT TCTTTTAGGA TAAAATTCAA AACCCTTTAT
CTGGTTGGTA AACCTCTGCC TAATTGGGAA CCTTCTTTCT
CCACAACCTC ATATTGTACA CTCCAATTTT ATCTCTGTTC
TCCAACCATG GAAGCTATTT GTCATGATTC CTCCTTGTGT
CATTTTTTTT CTGTCAACCT TGGGGCTTTT GTGTTTGCTG
TTCACCTTAC CTCCTTTTAT TGTAACTTC TACTCATCTT
TCAATTTTCA ACTTAAGTGT TCTCAGAGAA ACCTACTTTG
ATTTTCTTGG TCCANAACGG TTCTCTGGAT GTGAACCTT

FIG. 9 (Continued)

ATAGCACATA ATTTTCACTT TTTTCCACAA AACTCGCTCC
 TATCACCTGT TACAAGCATT TACCTCTGAT AACAAAGAACT
 TTCAAATATC TAGCTGTCAT GTAAGCACTT TTCATAAACA
 TTAAGAGTAT CTGTGACACT TATGTGTAAT GTTTCGTATC
 TCTGAAATTG ATATTTACCA GTCATTTATC TTGGCTACCA
 ACTAACAACCT ATCCATATTA TCTGTACCAA TCAGATGTAT
 AATCACAATT TTGTGTGACA GAAAATGGCT AAACCTTGATC
 CAAGGCTATT ACATGCTTT: ATCAACTGCA CAATCTTTAT
 ATATGTCAAT TATTGATCTT TAACTGATTT CCTTCTTATG
 :GATTTTCTC CTCTGCTTAT CATGTATGCC TAACAT:GAC
 AAAAAAG:AG CCTA:TCATT GCAGCCAGTA TGATAATACT
 CA:GTCTGTG GGGCTTCTTA TTTGCTTAT: TCCATCATCA
 TCTGTCTGCTG TTGATGTCTT TGCCTATGCA CAATCATATG
 :ACCCATCAC ATCTGTATGA AGAGC:TGGA TGACTAGGAT
 TAATATTCT: AT::TTTAG GTTCTTATT: CAGCAGAAAT
 ATTAGATAA: TCAATGTCTT TTTATTCCTG TAGGTGTGAA
 ATCCAGACAA TTGAAGATGG GGCATATCAG AGCCT:AAGC
 CACCTCTCTA CCTTAATATT GACAGGAAAC CCCATCCAGA
 GTTTAGCCCT GGGAGCCTTT TCTGGACTAT CAAGTTTACA
 GAAGCTGGTG GCTGTGGAGA CAAATCTAGC ATCTCTAGAG
 AACTTCCCCA TTGGACATCT CAAAACCTTG AAAGAACTTA
 ATGTGGCTCA CAATCTTATC CAATCTTTCA AATTACCTGA
 GTATTTTTCT AATCTGACCA ATCTAGAGCA CTTGGACCTT
 TCCAGCAACA AGATTCAAAG TATTTATTGC ACAGACTTGC
 GGGTTCTACA TCAAATGCCC CTACTCAATC TCTCTTTAGA
 CCTGTCCCTG AACCCTATGA ACTTTATCCA ACCAGGTGCA
 TTAAAGAAA TTAGGCTTCA TAAGCTGACT TTAAGAAATA
 ATTTTGATAG TTAAATGTA ATGAAAACCT GTATTCAAGG
 TCTGGCTGGT TTAGAAGTCC ATCGTTTGGT TCTGGGAGAA
 TTTAGAAATG AAGGAAACCT GGAAAAGTTT GACAAATCTG
 CTCTAGAGGG CCTGTGCAAT TTGACCATTG AAGAATTCCC
 GATTAGCATA CTTAGACTAC TACCTCGATG ATATTATTGA
 CTTATTTAAT TGGTTGACAA ATGGTTCTTC ATTTTCCCTG
 GTGAGTGTGA CTATTGAAAG GGTAAAAGAC TTTTCTTATA
 ATTTTCGGATG GCAACATTTA GAATTAGTTA ACTGTAAATT
 TGGACAGTTT CCCACATTGA AACTCAAATC TCTCAAAGG
 CTTACTTTCA CTTCCAACAA AGGTGGGAAT GCTTTTTTCAG
 AAGTTGATCT ACCAAGCCTT GAGTTTCTAG ATCTCAGTAG
 AAATGGCTTG AGTTTCAAAG GTTGCTGTTC TCAAAGTGAT
 TTTGGGACAA CCA:GCCT:A AAGTATTTAG ATCTGAGCTT
 CAATGGTGTT A:TTACCATG AGTTCAAACCT TCTTGGGCTT
 AGAACA:ACT AGAACATCTG GATTTCCAGC ATTCCAATTT
 GAAACA:AAT GAGTGAGTTT TCAGTATTCC TA:TCACCA
 GAAA:CCT:C ATTTACCTTG ACATTTCTCA TACTCACACC
 AGAGTTGCTT TCAATGGCAT CTTCAATGGC TTGTCCAGTC
 TCGAAGTCTT GAAAATGGCT GGCAATTCTT TCCAGGAAAA
 CTTCTTCCA GATATCTTCA CAGAGCTGAG AAACCTTGACC

FIG. 9 (Continued)

TTCCTGGACC TCTCTCAGTG TCAACTGGAG CAGTTGTCTC
 CAACAGCATT TAACTCACTC TCCAGTCTTC AGGTACTAAA
 TATGAGCCAC AACAACTTCT TTTCATTGGA TACGTTTCCT
 TATAAGTGTC TGAAGTCCCT CCAGGTTCTT GATTACAGTC
 TCAATCACAT AATGACTTCC AAAAAACAGG AACTACAGCA
 TTTTCCAAGT AGTCTAGCTT TCTTAAATCT TACTCAGAAT
 GACTTTGCTT GTACTTGTGA ACACCAGAGT TTCCTGCAAT
 GGATCAAGGA CCAGAGGCAG CTCTTGGTGG AAGTTGAACG
 AATGGAATGT GCAACACCTT CAGATAAGCA GGGCATGCCT
 GTGCTGAGTT TGAATATCAC CTGTCAGATG AATAAGACCA
 TCATTGGTGT GTCGGTCCTC AGTGTGCTTG TAGTATCTGT
 TGTAGCAGTT CTGGTCTATA AGTTCTATTT TCACCTGATG
 CTTCTTGCTG GCTGCATAAA GTATGGTAGA GGTGAAAACA
 TCTATGATGC CTTTGTTATC TACTCAAGCC AGGATGAGGA
 CTGGGTAAGG AATGAGCTAG TAAAGAATTT AGAAGAAGGG
 GTGCCTCCAT TTCAGCTCTG CCTTCACTAC AGAGACTTTA
 TTCCCGGTGT GGCCATTGCT GCCAACATCA TCCATGAAGG
 TTTCCATAAA AGCCGAAAGG TGATTGTTGT GGTGTCCCAG
 CACTTCATCC AGAGCCGCTG GTGTATCTTT GAATATGAGA
 TTGCTCAGAC CTGGCAGTTT CTGAGCAGTC GTGCTGGTAT
 CATCTTCATT GTCCTGCAGA AGGTGGAGAA GACCCTGCTC
 AGGCAGCAGG TGGAGCTGTA CCGCCTTCTC AGCAGGAACA
 CTTACCTGGA GTGGGAGGAC AGTGTCTTGG GGCAGCACAT
 CTTCTGGAGA CGACTCAGAA AAGCCCTGCT GGATGGTAAA
 TCATGGAATC CAGAAGGAAC AGTGGGTACA GGATGCAATT
 GGCAGGAAGC AACATCTATC TGAAGAGGAA AAATAAAAAC
 CTCCTGAGGC ATTTCTTGCC CAGCTGGGTG CAACACTTGT
 TCAGTTAATA AGTATTAAAT GCTGCCACAT GTCAGGCCTT
 ATGCTAAGGG TGAGTAATTC CATGGTGCAC TAGATATGCA
 GGGCTGCTAA TCTCAAGGAG CTTCCAGTGC AGAGGGAATA
 AATGCTAGAC TAAAATACAG AGTCTTCCAG GTGGGCATTT
 CAACCAACTC AGTCAAGGAA CCCATGACAA AGAAAGTCAT
 TTCAACTCTT ACCTCATCAA GTTGAATAAA GACAGAGAAA
 ACAGAAAGAG ACATTGTTCT TTTCCTGAGT CTTTTGAATG
 GAAATTGTAT TATGTTATAG CCATCATAAA ACCATTTTGG
 TAGTTTTGAC TGAAGTGGGT GTTCACTTTT TCCTTTTTGA
 TTGAATACAA TTTAAATTCT ACTTGATGAC TGCAGTCGTC
 AAGGGGCTCC TGATGCAAGA TGCCCCTTCC ATTTTAAGTC
 TGTCTCCTTA CAGAGGTTAA AGTCTAGTGG CTAATTCCTA
 AGGAAACCTG ATTAACACAT GCTCACAACC ATCCTGGTCA
 TTCTCGAGCA TGTTCTATTT TTTAACTAAT CACCCCTGAT
 ATATTTTTAT TTTTATATAT CCAGTTTTCA TTTTTTTACG
 TCTTGCCTAT AAGCTAATAT CATAAATAAG GTTGTTTAAG
 ACGTGCTTCA AATATCCATA TTAACCACTA TTTTTCAGG
 AAGTATGGAA AAGTACACTC TGTCACCTTG TCACTCGATG
 TCATTCCAAA GTTATTGCCT ACTAAGTAAT GACTGTCATG
 AAAGCAGCAT TGAAATAATT TGTTTAAAGG GGGCACTCTT

FIG. 9 (Continued)

TTAAACGGGA AGAAAATTTC CGCTTCCTGG TCTTATCATG
 GACAATTTGG GCTATAGGCA TGAAGGAAGT GGGATTACCT
 CAGGAAGTCA CCTTTTCTTG ATTCCAGAAA CATATGGGCT
 GATAAACCCG GGGTGACCTC ATGAAATGAG TTGCAGCAGA
 TGTTTATTTT TTTCAGAACAA AGTGATGTTT GATGGACCTA
 TGAATCTATT TAGGGAGACA CAGATGGCTG GGATCCCTCC
 CCTGTACCCT TCTCACTGCC AGGAGAACTA CGTGTGAAGG
 TATTC AAGGC AGGGAGTATA CATTGCTGTT TCCTGTTGGG
 CAATGCTCCT TGACCACATT TTGGGAAGAG TGGATGTTAT
 CATTGAGAAA ACAATGTGTC TGG AATTAAT GGGGTTCTTA
 TAAAGAAGGT TCCCAGAAAA GAATGTT CAT TCCAGCTTCT
 TCAGGAAACA GGAACATTCA AGGAAAAGGA CAATCAGGAT
 GTCATCAGGG AAATGAAAAT AAAAACCACA ATGAGATATC
 ACCTTATACC AGGTAGATGG CTACTATAAA AAAATGAAGT
 GTCATCAAGG ATATAGAGAA ATTGGAACCC TTCTTCACTG
 CTGGAGGGAA TGGAAAATGG TGTAGCCGTT ATGAAAAACA
 GTACGGAGGT TTCTCAAAAA TTA AAAATAG AACTGCTATA
 TGATCCAGCA ATCTCACTTC TGTATATATA CCCAAAATAA
 TTGAAATCAG AATTTCAAGA AAATATTTAC ACTCCCATGT
 TCATTGTGGC ACTCTTCACA ATCACTGTTT CCAAAGTTAT
 GGAAACAACC CAAATTTCCA TTGGAAAATA AATGGACAAA
 GGAAATGTGC ATATAACGTA CAATGGGGAT ATTATTCAGC
 CTAAAAAAG GGGGGATCCT GTTATTTATG ACAACATGAA
 TAAACCCGGA GGCCATTATG CTATGTAAAA TGAGCAAGTA
 ACAGAAAGAC AAATACTGCC TGATTTTCATT TATATGAGGT
 TCTAAAATAG TCAAATCAT AGAAGCAGAG AATAGAACAG
 TGGTTCCTAG GGAAAAGGAG GAAGGGAGAA ATGAGGAAAT
 AGGGAGTTGT CTAATTGGTA TAAAATTATA GTATGCAAGA
 TGAATTAGCT CTAAAGATCA GCTGTATAGC AGAGTTCGTA
 TAATGAACAA TACTGTATTA TGCACCTAAC ATTTTGTTAA
 GAGGGTACCT CTCATGTTAA GTGTTCTTAC CATATACATA
 TACACAAGGA AGCTTTTGGG GGTGATGGAT ATATTTATTA
 CCTTGATTGT GGTGATGGTT TGACAGGTAT GTGACTATGT
 CTAAATCAT CAAATTGTAT ACATTAAATA TATGCAGTTT
 TATAATATCA AAAAAAAAAA AAAAAAAAAA

FIG. 9 (Continued)